

REMARKS

Obviousness Rejections

On page 3 of the Office Action, in paragraph 4, claims 1, 4, 12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petritsch et al (US 6340789) in view of Stossel et al (US 7223484) as evidenced by Asfandiarov et al (Investigation of Electron Structure of 2,1,3-Benzothiadiazole Derivatives by Means of Negative Ion Mass Spectrometry, Photoelectron Spectroscopy and Absorption Spectroscopy; Rapid Commun. Mass Spectrom. 12, 595-602, 1998), Nakaya et al (US 5792557), and Ise et al. (US 2002/0028329). Also, on page 12 of the Office Action, in paragraph 30, claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petritsch et al (US 6340789) in view of Stossel et al (US 7223484) as evidenced by Asfandiarov et al (Investigation of Electron Structure of 2,1,3-Benzothiadiazole Derivatives by Means of Negative Ion Mass Spectrometry, Photoelectron Spectroscopy and Absorption Spectroscopy; Rapid Commun. Mass Spectrom. 12, 595-602, 1998), Nakaya et al (US 5792557), and Ise et al. (US 2002/0028329) as applied to claim 17 above, and further in view of Iwasaki (US 2003/0209651).

In response, Applicant notes initially that the claimed "at least one electron transporting organic material" was limited to the compound of the formula (X) in the Amendment filed on July 28, 2010 to differentiate from the compounds disclosed in Kimura (US2003/0072965A1), and the Examiner now cites a new reference Ise et al. (US2002/0028329A1) in the outstanding Office Action.

Further, Applicant notes that although the formula (A) disclosed in paragraphs [0021] and [0069] of Ise et al. cited by the Examiner does not correspond to the claimed formula (X) because the central ring is bonded with N atom of each of three surrounding rings in the formula

(A) of Ise et al., the formula (B-IX) disclosed in the paragraph [0108] of Ise et al. corresponds to the claimed formula (X) and the compounds D, 119 and 21 utilized in Examples 1 and 3 of the present specification are disclosed in Ise et al.

However, Applicant submits that the claimed "at least one electron transporting organic material" limited to the compound of the formula (X) provides unexpected results. In particular, Examples 1 and 3 of the present specification show that utilizing compound 21, which is within the scope of the claimed formula (X), gives the unexpectedly superior effect that quantum efficiency, which is a specific performance characteristic for a photodetector, is more than 40%. Thus, although compound 21 is also disclosed in Ise et al., the surprising effect regarding quantum efficiency obtained by utilizing compound 21 is not taught in Ise et al., which is directed to a light emitting element rather than a photodetector. When an unexpectedly superior effect is demonstrated by utilizing a compound disclosed in a secondary cited reference in the structure of the main cited reference, the unobviousness of the claimed combination has been shown.

Thus, Applicant submits that the present invention is not obvious over the cited art, and withdrawal of these rejections is respectfully requested.

Conclusion

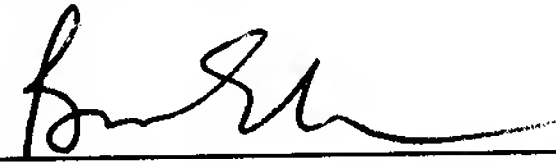
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. § 1.116
Appln. No.: 10/593,960

Attorney Docket No.: Q97019

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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